Appln. No. 10/577,646 Amdt. dated December 7, 2007

Reply to Office action of September 7, 2007

Amendments to the Claims:

This listing of the claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

- 1. (Currently Amended) Apparatus A twin roll caster comprising an apparatus for confining impurities of a molten metal fed by means of a discharger and contained into an area (3) of a strip continuous casting mould delimited by the side surfaces of two counterrotating casting rolls with horizontal axis (1a, 1b) and by two containment side plates (2a, 2b) positioned in contact with the rolls' bases, eharacterized in that it comprises said apparatus comprising:
- a discharger (4) having at least two first series of holes (4a, 4a') for the molten metal supply, each series being formed by at least a pair of holes respectively directed towards one of the opposed side surfaces of the two rolls (1a, 1b) and at least a second pair of holes (4b, 4b') for the molten metal supply, each hole of such second pair being directed towards the side plate nearest thereto, and said at least one second pair of holes (4b, 4b') being positioned at a greater depth with respect to said two first series of holes (4a, 4a'); and
- at least two pairs of barriers (5) present in one part of the area (3)

 eomprised between the end of the plungernozzle and the containment side plates (2a, 2b),

 forming a Y-shaped angle between the cross-sections of said barriers-therebetween, lying on a

 same horizontal plane, an Y-angle.
- Currently Amended) Apparatus The twin roll caster comprising the apparatus for confining the impurities of a molten metal contained into a strip continuous casting mould according to claim 1, wherein the holes of said first series of holes (4a. 4a') of the

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discharger (4) are positioned symmetrically with respect to the phangernozzle centre and slanted on the horizontal plane by an X angle of at least 5° with respect to the perpendicular of the rolls' axis, so that each hole of each pair be directed in a divergent way towards the side plate nearest thereto.

3. (Currently Amended) Apparatus-The twin roll caster comprising the apparatus for confining the impurities of a molten metal contained into a strip continuous casting mould according to claim 2, wherein the holes of said first series of holes (4a, 4a') of the discharger (4) are slanted on the horizontal plane by an X angle optionally different for each pair of holes.

4. (Currently Amended) The twin roll caster comprising the apparatus

Apparatus-for confining the impurities of a molten metal contained into a strip continuous

casting mould according to any of the claims claim 1-to-3, wherein said second pair of holes (4b, 4b') of the discharger (4) is positioned at a depth greater by at least 5 mm with respect to any of the holes of the first two series of holes (4a, 4a').

5. (Currently Amended) The twin roll caster comprising the apparatus

Apparatus-for confining the impurities of a molten metal contained into a strip continuous

casting mould according to any-of-the-elaimsclaim 1-to-4, wherein the holes of said second pair

(4b, 4b') of the discharger (4) are slanted downwards by an angle eomprised-ranging between 0° and 30°.

6. (Currently Amended) The twin roll caster comprising the apparatus

Apparatus-for confining the impurities of a molten metal contained into a strip continuous

casting mould according to any of the claimsclaim 1-to-4, wherein the holes of said first series of
holes (4a, 4a') of the discharger (4) are slanted upwards by an angle comprised ranging between

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0° and 45°.

- 7. (Currently Amended) The twin roll caster comprising the apparatus

 Apparatus-for confining the impurities of a molten metal contained into a strip continuous

 casting mould according to any-of-the-elaimsclaim 1-to-6, wherein the holes of said first series of
 holes (4a, 4a') of the discharger (4) have round-shaped cross-section with a diameter eemprised

 ranging between 5 and 20mm.
- 8. (Currently Amended) The twin roll caster comprising the apparatus

 Apparatus-for confining the impurities of a molten metal contained into a strip continuous

 casting mould according to any of the claims claim. 140-6, wherein the holes of said first series of holes (4a, 4a') of the discharger (4) have a cross-section with a polygonal shape.
- 9. (Currently Amended) The twin roll caster comprising the apparatus

 Apparatus-for confining the impurities of a molten metal contained into a strip continuous

 casting mould according to any of the claimsclaim 1-te-6, wherein the holes of said first series of

 holes (4a, 4a') of the discharger (4) have a partially round-shaped-round shape and a partially

 polygonally-shaped cross-section.
- 10. (Currently Amended) The twin roll caster comprising the apparatus
 Apparatus-for confining the impurities of a molten metal contained into a strip continuous
 casting mould according to claim 8 or 9, wherein the polygonal holes of said first scries of holes
 (4a, 4a') of the discharger (4) are, at least partially, horizontal have a cross-section having a
 height lower-less than 20 mm.
- 11. (Currently Amended) The twin roll caster comprising the apparatus

 Apparatus-for confining the impurities of a molten metal contained into a strip continuous

 casting mould according to any of the preceding claims claim 1, wherein the ratio between the

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total area of said second pair of holes (4b, 4b') and the total area of said first series of holes (4a, 4a') is comprised ranges between 0.15 and 0.30.

- 12. (Currently Amended) The twin roll caster comprising the apparatus

 Apparatus-for confining the impurities of a molten metal contained into a strip continuous

 casting mould according to any of the claims claim 140-14, wherein said discharger (4) has, in
 the centre, at least an additional hole directed perpendicularly to the side surface of the rolls,
 positioned between said first series of holes (4a, 4a') of the discharger (4).
- 13. (Currently Amended) The twin roll caster comprising the apparatus

 Apparatus-for confining the impurities of a molten metal contained into a strip continuous
 casting mould according to any of the claims-claim 1-to-12, wherein said Y angle is comprised
 ranges between 5° and 45°.
- 14. (Currently Amended) The twin roll caster comprising the apparatus

 Apparatus-for confining the impurities of a molten metal contained into a strip continuous

 casting mould according to any of the claims claim 1-to-13, wherein each of said barriers (5) is

 constituted by one or more parts of refractory or ceramic material containing compounds

 selected from the group comprising Al₂O₃, BN, ZrO₂, SiC, SiN, SiO₂, MgO and combinations

 thereof
- 15. (Currently Amended) The twin roll caster comprising the apparatus

 Apparatus-for confining the impurities of a molten metal contained into a strip continuous

 casting mould according to any of the claims-claim 1 to 14, wherein said barriers (5) are slanted with respect to the vertical.
- 16. (Currently Amended) <u>The twin roll caster comprising the apparatus</u>
 Apparatus-for confining the impurities of a molten metal contained into a strip continuous

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casting mould according to any of the claimsclaim 1-to-15, wherein said barriers (5) are reversibly-fastened to a lid positioned in the mould above the molten metal bath or they said barriers (5) are integratine an integral part of the lid itself.

17. (Currently Amended) The twin roll caster comprising the apparatus

Apparatus-for confining the impurities of a molten metal contained into a strip continuous

casting mould according to any of the claims claim 1-to 15, wherein said barriers (5) are fastened

to said discharger (4) or they belong to the discharger itself.

18. (Currently Amended) The twin roll caster comprising the apparatus

Apparatus-for confining the impurities of a molten metal contained into a strip continuous

casting mould according to any of the elaims claim 1-to 13, wherein said barriers (5) are formed
by jets of inert or reducing gas directed from the a top towards the a surface of the molten metal.

19. (Currently Amended) The twin roll caster comprising the apparatus Apparatus-for confining the impurities of a molten metal contained into a strip continuous casting mould according to claim 18, wherein said gas, before being blown on the molten metal surface, is preheated at a temperature greater than 100 C°.

20. (Currently Amended) Use of the twin roll caster comprising the apparatus for confining the impurities of a molten metal contained into a strip continuous casting mould according to any of the claims claim 1-to-19, wherein during use, said barriers (5) are positioned at least 10 mm away from the side surface of the rolls, at least 20 mm away from the side plates (2a, 2b) and not less than 10 mm away from the discharger.

 (Currently Amended) Use of the twin roll caster comprising the apparatus for confining the impurities of a molten metal contained into a strip continuous casting mould Appln. No. 10/577,646 Amdt. dated December 7, 2007 Reply to Office action of September 7, 2007

according to the preceding claim 1, wherein during use said barriers (5) are partially dipped into the molten metal for at least 5 mm.